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MAJOR GENERAL THORD BONDE

Following is a translation of a newspaper article by
Gunnar Unger in Svenska Dagbladet Stockholm September 23,
1957

Contemporary Swedish Gentlemen XV
Thoughtless Subaltern Became Thoughtful General
The New Army Chief
The Soldier is more important than all the robot weapons

(By Carl Unger, staff writer for Svenska Dagbladet)

Skövde. When Thord Bonde - son of the charming man of distinction and "life artist" Carl Bonde of Horningsholm - as a young and gay hussar was asked, by a friendly older superior, if he ought not try to get into the War College, the reply could have been: - "Maybe so. I hadn't thought of it."

Was Thord Bonde at that time really so thoughtless, even if things were done in a rather casual way in the K3 mess in the early 20's? We may leave it there, but we know, that the remark is typical for the man in question. Typical for his unpretentiousness, his retiring disposition, typical for his reluctance to make premature statements. We also know that he became a captain on the General Staff in 1933, ten years later he was a lieutenant colonel, during the last war years he was military attaché in Washington, and on his return home he became a colonel and chief of section 1 on the defense staff, one of the key positions in the military command.

In 1950 he was appointed commanding officer of our outstanding prestige regiment "Svea Livgarde". A few years later he was selected for the task of being the organizer and the first chief of the military staff college, our brain trust for military policy.

After he had carried out this urgent task in a manner which was generally regarded as being above criticism, he, took with the rank of major general, command first of the VII military district and a half year later of district III, where he has been active during the last two years. On October 1 he takes over the post of chief of the army, with the rank of Lieutenant General. It is one of the most brilliant careers in our contemporary military annals. Thord Bonde has apparently learned to think.

Wise, Firm and Knowledgeable.

Strictly speaking, the once perhaps thoughtless hussar is now regarded as one of the most thoughtful persons in the higher military command. If one asks his colleagues about his most outstanding characteristic, the answer is always the same: his unusually sound judgment. That is first of all due to the fact that Bonde thinks first - very carefully and on the basis of all available facts -- and speaks afterwards, something which is not always the case among people generally. The first component of the sound judgment is in other words wisdom, the wisdom of a man who never expresses an unconsidered word. The second component is character, the character of a man who by his comrades within all branches of our defense is regarded as a model of fair-mindedness and reliability. The third component is knowledge, the knowledge of a man who not only has a command in detail of the total problem of our defense, but who also has acquired extensive information both in the field of foreign policy and of history.

Thord Bonde has neither the brilliance nor the arrogance of his gifted predecessor as army chief, Carl August Ehrensvard. Instead he has a quiet matter-of-factness which gives him an undisputed authority acquired without any gestures. From this description one might get the impression of dull military excellence, of gloomy warlike virtue. It is not quite that bad. The tall, slender, slightly bald general with the searching, somewhat sad grey-blue eyes and the rather dry, quite impersonal manner, still conceals the hussar. "Maybe that much thinking has made the hussar less gay: he is still there, for the good of his small circle of friends, where Thord Bonde talks if not before, then at least at the same time as he thinks."

Best to be Regimental Chief

This hussar can even - by and by - show himself to the interviewer, who in the cheerless barracks building of the III army staff in Skovde looks up the departing military commander to listen to his views on the Swedish army and its new chief.

"Which military task have you found most rewarding, general?"

"That question is difficult to answer. Much of what I have worked on has in various ways had its fascination. But I do not believe that there is anything in an army career that quite can be compared to being commander of a regiment. It is a position high enough to carry great personal responsibility, and so that one will have a richly varied service but still not so high that one loses the personal contact with one's subordinates."

"But how about the military staff college?"

"Of course it was both an interesting and agreeable assignment to direct the work of the Staff College. Agreeable to a large degree because one later so often has contact in civil connections with persons who have been students at the Staff College. We have learned to understand the points of view of the civilians, and they to understand ours, and that is indispensable for common defense planning."

Those Liable to Draft Accept Defense

What is the most lasting impression the general has from his time as military commander?

"That I believe the attitude of those liable to draft towards national defense is consistently developing in a positive direction. This has been the case for a long time, but I am happy to say that it is a development which accelerates steadily. By the way, I might mention that we were quite worried about what the influence would be of the unrestricted liquor on the attitudes and behavior of the soldiers, but fortunately the temperance situation was mostly surprisingly good. I cannot see that any deterioration has taken place within our field of activity since the alcohol restrictions were lifted."

"What are your views, general, on the future of the army?"

Thord Bonde's expression becomes almost roguish.

"Is it not so, whether it concerns military or civilian activity, that one cannot do much without money, but one can do a lot with money, of course on the condition that the money is used right. The Swedish Army is at this time as well armed and as modern as any army in the world, with the exception of those of the great powers. In addition we have several new weapons under design or testing. But it is obvious that if we do not get the means, we cannot keep up with the developments, and in military matters that is the same as retrogression. I make no demand that we should acquire a little of everything in all fields, but I should be grateful if we could get what is absolutely necessary.

What are Conventional Weapons:

"What is absolutely essential? Is it still the conventional weapons or is it something new?"

"Now I in my turn will take the liberty to ask, what are conventional weapons? Recently I read in an American journal about 'brand new, epoch-making conventional weapons'. I do not know what conventional weapons are, unless they are all weapons that have been in use a couple of years. It is not long since we thought jet planes were something 'brand new' and 'epoch-making'. But they are now reckoned among the conventional weapons. The expression is inadequate and brings only trouble and confusion into the discussion of defense policy. Moreover I think all this talk about the wonderful machines that are going to make war on us is dangerous and misleading. Certainly quality is fine, but it would be a strange kind of thinking if one would demand quality in machines and not in humans."

"One does not make war on machines but on men," the general continues. "It is not a question of conquering machines but men, and if the men are no good there is no comfort in ever so fine machines. We Swedes are known to be highly entertained by technical things, but we should remember that humans are much more complicated and equipped with many more fine points than any machine. With grossly simplified

reasoning I should like to say that our first need for quality should concern the soldiers in our army, not the machines, and that the quality of the soldiers depends on two things, good training and a will for defense. If that is lacking, no machines can help us."

"I am afraid the impression is catching on, that the next war will be determined by pushing buttons, and that an explosion will then occur here or there. This gives people the impression that they can escape blood, sweat and tears, but it is not so. This is even less possible in our barbaric times than it was in the 19th or the 18th century, when a sort of civilized warfare still existed. The thought that in a future war we may be in the spectator stands - that some few of us will do it all - is unrealistic. Therefore we must not forget the humans to the extent that we stare ourselves blind at the machines."

"But how about missiles?"

"The ultimate issue will be between man and man. If we are to conduct a war to its final conclusion, there must be men who can and will fight. A nation of such men has greater selfreliance and therefore greater will for resistance than a nation which expects that others, that machines, will fight for them. Which of course does not exclude the fact that we are going to fight with both missiles and other mechanical means as well."

"Do you not think, general, that the atom bomb necessarily will weaken the will for defense?"

We must get Atomic Weapons

"No. Why should just we surrender? Who says atomic warfare would hit us especially hard? We have never been as uncertain about the outcome of a future war as we are now. It is more than uncertain that a major war can even come in question in the present situation."

"But is it not clear under any circumstances that our defense must be equipped with atomic weapons?"

"Yes, of course. Our soldiers must be as far as possible equal to the opponent and equipped with the same sort of protection. To do anything different would be to expose them to risks against which they could not defend themselves, to undermine their will for resistance by sending them defenseless to death."

"It is said that England is considering abolishing its drafted army and replacing it with an enlisted army. Is that idea any actuality as far as Sweden is concerned?"

"England is an island, and her strategic problems are dependent on that. If we were in the same advantageous position we might of course also think of the possibility of being satisfied with an enlisted army. But even if that were so, I do not think we could provide the economic means necessary to support an enlisted army."

"How about officer recruitment? Is that not the worst problem of the army just now - aside from budget problems?"

Command Problem is a Factor of Uncertainty

"It is really the recruitment of non-commissioned officers that is unsatisfactory, and that is to a high degree a question of appropriations. Those who quit do so in the great majority of cases for economic reasons, as far as our investigations show. The many vacancies among the non-commissioned officers makes life for the rest of the command so much harder, because they simply have too much to do. In this way it influences officer recruitment all together. In addition, of course, there is no end to that study of the organization of the command corps which has been going on for years, and which therefore has created a practically permanent condition of uncertainty in the field."

"General, you are now about to become chief of the army. Is it not your understanding that the conflicts among the defense branches have to a large extent been smoothed out in recent years and that as a result we may look forward to good friction free cooperation among the army, navy and air corps?"

The old hussar pops up.

"Why should just the military be in agreement when nobody else is? The scantier the appropriations for defense are, the greater must be the differences of opinion about how they are to be used. Certainly we hope we can stand together. But the big test comes when the money begins to run short."

"But still, is it not so that total defense thinking rather than service branch thinking is becoming typical of our younger military personnel?"

"Yes, undoubtedly. And that is valuable and should be strengthened if we could bring about a more unified military training with regard to those subjects which are not wholly determined by the branch of the service. Our defense leadership is usually united if we compare it with the situation in other fields. And if we only could have an ample budget there would no longer be any lack of unity either. But that is just what the problem is about. We have plenty of ideas - maybe more than enough - will we also get money to carry them out?"

"You like to ride, general. Do you have any other leisure time occupations?"

Thord Bonde relaxes so far that he even laughs.

"I have always thought that hobbies limit a person's individual freedom. When I am not busy I want to do just what happens to occur to me."

G.U.

SVEN BROHULT

Following is a translation of a newspaper article in
Dagens Nyheter, Stockholm, May 29, 1959

Biochemist becomes new IVA director

At the turn of the year 1959/1960 there will be a change in the position of executive director of Ingenjörsvetenskapsakademien (IVA) The Academy of Engineering Science. Professor Edy Velander will then leave the office with a pension, and according to a decision by the cabinet on Thursday, Sven Brohult, docent at Uppsala University, has been selected to be his successor. He has been appointed to hold that office from 1960 to 1965.

Docent Brohult was born 1905 and graduated from college in France in 1925, which is not among the easiest things to do. Three years later he graduated in philosophy in Uppsala, followed by a master's degree in 1929. He took the doctorate in 1940 with a thesis on those giants of the proteins, the hemocyanins. The same year he became docent in chemistry at the university, and since 1942 he has been chief of the research laboratory LKB which he leaves at the end of this year.

At the LKB he has laboratory advanced biochemistry with both basic and applied research. Gamma globulin which is generally used against measles and German measles is an example of a research result in this field.

Docent Brohult, who became a member of IVA in 1953, says himself that "it will not be easy to succeed Velander" who as we know is a versatile man. He will continue the latter's work in carrying out the objectives of the academy. This is to "work for the advancement of Swedish industry and technical research". It is indicative of today's situation that the new IVA director puts especial weight on really bringing the research results out to the industry.

The academy is like a converter, he says. It receives and converts knowledge and experience that is found in the country and among its members. It also receives material from abroad, for example from the technical attaches. With this much work is done which does not show or is not supposed to show, outwardly.

As a chemist Brohult may be able to use his talents also in IVA, although he now must put much of his research work aside. But he takes comfort in the fact that he has good associates who can continue it.

From TVF 30 (1959) no. 4

New Executive Director for IVA

Docent Sven Brohult PhD

His Royal Majesty has in accordance with the recommendation of the academy appointed docent Sven Brohult to be executive director of

Ingenjörsvetenskapsakademien for the six year period 1960-65. Docent Bröhult, who was born in 1905, has studied in Uppsala and in 1940 became a PhD and docent at The Svedberg Institute for Physical Chemistry with a thesis on the hemocyanins. In 1942 Bröhult joined the IKB research laboratory as chief. The fields in which he has worked especially are surface chemistry, protein chemistry and the study of the bitter element in hops. His works have been published in a number of scientific papers.

Bröhult became a member of IVA in 1953 and a member of the National Technical Research Council in 1957. He has been chairman of the Chemical Society since 1949.

USA EXPANDS ATOMIC PROTECTION RESEARCH CENTER FOR BURN INJURIES

Following is a translation of a newspaper article in Dagens Nyheter, Stockholm, December 19, 1955

The rapid development of the modern instruments of war has had the effect that for the first time in modern history the USA must reckon with the fact that war may even take place on the American continent. This "threat" has resulted in the systematic expansion of the USA's atomic protection and civil defense - especially medical service training with a view to war casualties. These were the observations made by Gustav Hesselblad, chief bureau physician of the Hospital Administration of the Defense Department in Stockholm, during a 6-week official visit to USA. In his baggage he brought home with him many tips for making Swedish medical service training more effective.

Dr. Hesselblad started his study trip by participating in a congress for military physicians in Washington, in American giant style. The conference occupied itself primarily with atomic or hydrogen bomb injuries. Very complete reports were presented on American research results. As an example Hesselblad mentioned that detailed lectures were given on the damage which the powerful light from an atomic explosion can do to the retina of the eye.

In the USA, Dr. Hesselblad reports, it is clearly understood that the supply of physicians and other medical personnel will be insufficient in case of an atomic bomb attack, and therefore a start has been made with an extensive program of training of voluntary personnel according to approximately the same methods as those followed in Sweden. All together the Americans were impressed by our civilian defense, and the report in Life on "Operation Granite" caused unanimous admiration. In this field we are actually quite a way ahead of the Americans.

What most impressed Dr. Hesselblad on the study trip which followed the physicians' congress was a visit to one of the USA's six

training centers for medical personnel, Brooke Army Medical Center near San Antonio, where a special research and training division has been established for the treatment of burn injuries.

To this division are brought the most severe burn injuries from the entire American territory. The burn injury division collaborates closely with the Air Force, which takes care of all transportation, so that the cases come to the division as "fresh" as possible. The result is admirable, the percentage of survival is very high.

Sweden has gained much good will in America, first of all thanks to the Korea hospital, says Dr. Hesselblad. The Swedish hospital was the first of considerable size opened in Korea.

SVEN GARD 50 YEARS

/Following is a translation of a newspaper article from Stockholms Tidningen October 1955/

That Sven Gard, virology professor at Karolinska *[institutet]* and one of the foremost generals in the world fight against polio will be 50 years old on November 3 comes as a surprise. He belongs to that young, active generation of scientists who among many other mental characteristics also include that of being able to maintain an intelligent contact with the press and the public.

He has been working hard during the last decade. If you remember him from Uppsala and see him now, you will notice that the intensive laboratory campaign has not gone by without leaving its marks.

He won great acclaim on Nobel Prize day 1954 for having eulogized the Nobel Prize winners Enders, Robbins and Weller for half an hour without a manuscript. Few thought at the time of the fact that it was a bitter moment for him (if he had been of such disposition). He was at the starting line before most, and it was primarily scientific luck that the three Americans first succeeded in cultivating the polio virus outside the organism.

On April 19, 1954 he gave his serious warning on the radio of a severe Swedish polio epidemic in the second half of 1954. It came, and thanks to his warning we were prepared.

For Sven Gard the fight goes on against polio and other virus diseases. Many have much to thank him for.

Heng.

GOSTA EHRENSVARD

/Following is a translation of a newspaper article by
Georg Unger from Svenska Dagbladet, Stockholm April 13,
1957

Portrait for Today

Already when Gosta Ehrensvard toddled around in the nursery, his proud parents, the feared naval warrior of the same name and his beautiful and unconventional countess, would have nominated him for the Nobel Prize. This indicated remarkable foresight. It is true that Gosta Ehrensvard is not yet a Nobel Prize winner, but that surely is only a question of time. In the meantime he recently received a gold medal from the Swedish Chemistry Society, entered a professorate in biochemistry in Lund, and is now definitively leaving the Wenner-Gren Institute in Stockholm, the pride of which he has been for 15 years.

The people of Lund will learn that outstanding research men can be developed in Stockholm also. Gosta Ehrensvard has achieved fame for the personal and original nature of his scientific contributions and in the words of his colleagues he is a "natural scientist without domicile in any classical branch of the sciences". So much the better, he is a colorful original, not only as a scientist but also as a human-being. At a time when the eccentric professor is beginning to be relegated to the world of legends, he makes a refreshing comeback in the person of Gosta Ehrensvard.

Ehrensvard was the man who, when at his doctor's disputation he discovered that he had forgotten the studs for the front of his starched shirt, quick as a flash substituted the one-gram weights from the laboratory scales. He was the one who during the war, when the then crown prince invited him for tea to discuss his method for making synthetic rubber, terrified the royal court officials by appearing in knickers. Finally, he was the one who caused even the people of Lund to raise their eyebrows, when as newly appointed professor he assisted at the conferment of a doctor's degree dressed in an old student gown four sizes too small and with a sheath knife at his side.

It is in other words this black sheep of the scientists who not only has amused himself by inventing synthetic rubber and synthetic gasoline, but also has brought about the joining of chain polymers into ring shaped ones, which as everyone knows is of basic importance for our knowledge of the world of carbohydrates and benzenes. Among his comrades Ehrensvard has a reputation for being the most uncompromising and unselfish among scientists, which gives his scientific and human originality a still deeper relief.

Perhaps his sense of fair play is connected with the fact that he always has been a good sportsman, in this respect somewhat different from the eccentric professors of earlier days. His specialty was the

standing broadjump and the shot put, but he is not bad as a long distance runner either. One evening after an academic ceremony, he found that he had missed the train to Stocksund where he lived. Without hesitation he started running home dressed in his full academic trappings, and is said to have arrived at about the same time as the train.

If the farmers on the plains of Scania some fine night observe a gentleman who in top hat and patent-leather shoes, with flying coattails is racing the train from Malmo to Lund, they need not be surprised. It is only Gosta Ehresnvard.

G.U.

BERTIL BJORKLUND

Following is a translation of a newspaper article from Svenska Dagbladet, Stockholm, January 26, 1960/

The cancer researcher docent Bertil Bjorklund of the State Bacteriological Laboratory, who by six sponsors from three parties was recommended for a personal laboratory appointment in immunology, received, in the fall of 1959, the largest research grant from American funds thus far given to a Swedish scientist, 1.3 million kronor.

The grant may be said to have come directly from the American Congress on recommendation of the National Cancer Council, where his studies were regarded as being of such importance that the American government should support them, to begin with for five years. His work facilities in the cramped quarters in the State Bacteriological Laboratory did not correspond to the importance attached by the USA to his immunological studies. Small closets and toilet facilities was all he had succeeded in "stealing" for his research there, which of course was not a part of the regular program of the State Bacteriological Laboratory.

Bertil Bjorklund, who has literary talent on his mother's side (she is the author Ingeborg Bjorklund) is not yet 40. His name first became known in connection with the reports coming from the USA in 1955 on the possibilities for a cancer serum. They produced much opposition and many hopes.

Dr. Bjorklund's first task was to discover whether there is any measurable difference between the cancer cell and ordinary healthy cells. Together with his wife and fellow researcher medical candidate Viveka Bjorklund, he succeeded as the first in the world, in proving that there is a clear difference in construction. In collaboration with the chemist Dr. Gunnar Lundblad he demonstrated that the difference lies in the surface layer which has a different molecular structure in the cancer cell.

This gives a clue to a protective reaction in the body against cancer, which in some way or another might be activated. It is with this a similar immunological problems concerning the large disease groups multiple sclerosis, rheumatic ailments, glaucoma, allergies, etc., that Dr. Bjorklund, who holds no permanent office in Sweden, occupies himself in his few square meters of laboratory space.

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RAGNAR NILSSON

/Following is a translation of a newspaper article in Svenska Dagbladet, Stockholm, November 5, 1958/

They Change Our Lives

Ragnar Nilsson, professor of microbiology and from 1943 to August 1 this year director of the College of Agriculture, was born in Varmland in 1903. He is therefore still a relatively young man. He became a PhD and docent in biochemistry in 1930, served as laboratory assistant at Stockholm University 1933-1936, became docent in microbiology at the College of Agriculture in 1937 and professor of the same subject in 1940. He is frequently employed in connection with various investigations, e.g. since the new year chairman of the Agricultural college investigation started in 1956.

About Cells and Crops

The summer residents of Bjorko-Arholma see him sometimes travelling along their roads in the most unconventional way - on a scooter. That is on the very rare occasions when Professor Ragnar Nilsson has some time left for himself. Most of his time he devotes to research, and to the development of the agricultural college at Ultuna, which he has been doing in his capacity of director for 15 years, and to investigative work.

As a scientist, he does not occupy himself with things that simple and easily understandable. The subjects he works with sound very subtle and exclusive, but they touch directly on all life.

It is primarily in three fields he has made, or has helped to make, pioneering contributions. The first - and perhaps the greatest - concerns carbohydrate metabolism. The work he has done here is of the kind that is of interest in many separate fields. It is a detail of the problem of energy conversion in practically all living organisms.

He has carried out his experiments in this field by means of yeast cells. The essence of these experiments has been to find out what the organization of the cells means to carbohydrate metabolism. Professor Nilsson has compared the process in living cells to that of cells in solutions. He has in this way come upon a long series of

factors that are decisive for the life of the cell. He has studied the details of the chain of reactions in question and has demonstrated matters of great importance. Such things improve the conditions for the utilization of energy. Take for example a muscle at work. The muscle requires energy to function. This requires an interplay between various reactions. Professor Nilsson has thrown light upon the way in which this interplay is organized.

Another field to which he has given much attention is the fixation of atmospheric nitrogen. This concerns the way in which plants are supplied with the nitrogen necessary for life. The background for his research in this field is its practical application to agriculture. There are bacteria in the soil that can fix atmospheric nitrogen and this can also take place through nodes on the roots of legume plants. These nodes are formed by inoculation with a certain type of bacteria. The nitrogen fixation that takes place in the nodes replaces the nitrogen which is usually supplied through fertilizer. Sweden is among the pioneers with regard to this inoculation, and cultures have for years been delivered from the microbiological institution in Ultuna. Professor Ragnar Nilsson has made a great contribution towards giving the plants the substances they need.

The third main field for his research is fodder preservation, i.e. ensilage production. Previously, mineral acids, for example, had been used for such preservation (the AIV method). Professor Nilsson has worked on a project of developing a purely biological preservation method. He tries by means of lactic acid bacteria to start a fermentation process that will work as a preservative. These experiments are continuously in progress. Very successful results have been achieved, but the method is not yet ready for practical application. It has, however, been tested successfully on experimental farms and an improved method for preserving the harvest from our grassland lies in the near future. An idea of the importance of a really good and practical method of preservation may be had from the fact that the National Society of Swedish Dairies buys milk for 2 billion kronor a year, milk which is mainly produced from our pasture fodder.

Kald

GRANTS OF 1.1 MILLION TO CANCER RESEARCHERS

Following is a translation of a newspaper article in
Dagens Nyheter, Stockholm, March 4, 1960/

Of the 2 million kronor which the directorate of the National Cancer Society has made available for grants to researchers during 1960, 1,123,425 kronor have now been distributed.

Professor T. Caspersson, Stockholm, has received 57,000 kr for studies on the cellular chemistry of the action of carcinostatics, and 9,000 kr for participation in the meeting of the committees of the International Cancer Union in Japan in October 1960 and, in connection with this, study visits to Japanese institutions and to institutions in Calcutta and Bombay.

Professor G. Klein, Stockholm, 98,500 kr for continued cytogenetic, population genetic and immunologic work with experimental tumors.

Professor L. G. Larsson, Umea, 75,000 kr for supplementary equipment for the isotope laboratory at the radiotherapeutic clinic in Umea, primarily intended for continued studies of scintigraphic experimental methods.

Docent P. Reichard and medical candidate O. Skold, Stockholm, 50,000 kr for continued studies on the enzymatic background for the development of resistance to fluorouracil.

Laboratory Researcher B. Sylven, Stockholm, 127,692 kr for continued studies of the topochemical distribution of certain enzymes, attempts at purification of cellular proteinases and continued studies of the leakage of enzyme carrying proteins from normal and tumorous cells in vivo and in vitro.

Medical Licentiate S. Almquist, Stockholm 24,000 kr for continued studies of the sulfation factor in plasma.

Philosophy Licentiate H. Baltscheffsky, Stockholm, 8,000 kr for studies in USA on the mechanics of electron transport connected phosphorylation.

Medical Licentiate O. Bartley and C. G. Helander MD, Goteborg, 16,800 kr for correlation of the roentgenological and pathologic-anatomical picture in bladder tumors.

Prosector N. O. Berg and Docent M. Lindgren, Lund 8,000 kr for continued radiobiological studies on the influence of the size of the radiation dose and the duration of treatment on the occurrence of delayed radiation damage to the brain and skin of rabbits.

Electron microscope technique.

Prosector A. Bergstrand and Medical Licentiate J. Ericsson, Stockholm, 2,350 kr for participation in a course in advanced electron microscope techniques.

Medical Licentiate E. Cederquist, Lund, 15,000 kr for isotope studies of mineral metabolism in skeletal metastases and primary bone tumors.

Professor C. Claesson, Uppsala, 16,400 kr for basic physical-chemical study of the fundamental chemical reaction which takes place in connection with the combustion process in smoking.

Medical Doctors S. J. Dencker and B. Swahn, Lund, 15,000 kr for biochemical analyses of spinal fluid proteins and lipoproteins in cerebral and medullary tumors.

Docent J. Einhorn, Stockholm, 21,800 kr for clinical and experimental studies with radioactive iodine isotopes of the thyroid function and thyroid cancer.

Medical Licentiate O. Eklof, Stockholm, 5,000 for study of ventricular polyp material.

Docent L. Ernstev, Stockholm, 38,000 for studies of the importance of certain diaphorase reactions in cellular metabolism.

Docent L. Ernstev, Stockholm, 38,000 for studies of the importance of certain diaphorase reactions in cellular metabolism.

Docent B. Falck, Lund 25,100 for studies of the generation and hormone production in ovarian tumors arising from well defined pure or mixed endocrine cell populations.

Laboratory Researcher A. Forssberg, Stockholm, 21,000 for radiation studies on phycomyces.

Chief Physician G. Giertz and Medical Licentiate B. Estborn, Stockholm, 6,400 for study of the tatrate sensitive acid serum phosphate activity correlated with the cytological and histopathological picture in cancer of the prostate.

Laboratory Researcher T. Gustafson, Stockholm, 31,000 for studies of induced enzyme formation and enzyme repression and the regulation of the hexomonophosphate shunt in animal cells cultured in vitro.

Professor C. A. Hamberger, Goteborg, 1,650 for a study visit in the USA.

Professors E. Hedvall and G. Hultquist together with Medical Licentiate G. Wijman, Uppsala, 11,000 for one year's work in cytologic cancer diagnosis in Uppsala, at the lung clinic, the academic hospital and the pathological institution, and to examine sputum and broncoscopy fluid with special reference to the occurrence of protein connected sulphhydryl groups.

Professor S. Hultberg and docent J. Einhorn, Stockholm, 7,500 for studies on intravesical radiation treatment of multiple urinary bladder tumors.

Docent T. Hultin, Stockholm, for continued studies of protein and nucleic acid conversion in connection with growth regulation and differentiation and tumor induction, and also on the primary effects of carcinogens.

Research on Cancer of the Uterus

Professor A. Ingelman-Sundberg, Stockholm, 17,000 for working out a method suitable for routine examinations for diagnosis of precancerous conditions of the uterine fluid and for early diagnosis of cancer of the neck of the uterus.

Docent O. Kjellgren, Goteborg, 10,500 for studies at Roswell Park Memorial Institute of the possibilities for a differentiated radiologic-surgical treatment plan for cancer colli uteri.

Laboratory Researcher C. B. Laurell and Docent J. Sjöquist, Malmo, 7,700 for studies of N-terminal amino acids in abnormal serum components.

Dr. E. Lewin, Goteborg, 11,000 for pathologic-anatomical studies of a body of material of gastrointestinal cancer.

Laboratory Researcher K. Liden, Lund, 22,000 for continued gamma-scintillation spectrometric studies *in vivo* of small quantities of radioactive materials in the human body.

Professors P. E. Lindahl and G. Agren, Uppsala, 35,000 for continued studies of the connection between nucleic acid content and nucleotide conversion, and the transphosphorylizing enzyme activity in hypertetraploid and hyperdiploid cells isolated from Ehrlich's hyperdiploid ascites tumors.

Docent S. Lovtrup, Goteborg, 13,200 for work on micromodification of the microbiological DNA method and for studies to determine whether a distribution of DNA can be demonstrated in the eggs of batrachians which is related to the dorsal/ventral axis.

Professors B. Malmgren and S. Bergstrom with laboratory researcher C. G. Heden, Professor G. Klein and Docent P. Reichard, Stockholm, 8,333 as a supplementary grant for setting up research projects and for research instruction in microbiologic genetics (under the direction of Dr. G. Bertani).

Professor J. Mellgren, Goteborg, 30,000 for continued studies of the growth characteristics of precancer.

Tumors in Blood

Professor J. Mellgren, E. Ljunggren and R. Romanus with Docent N. P. Bergh and Medical Licentiate O. Ericsson, Goteborg, 10,000 to study tumor cells in blood and the tendency to metastasizing in surgical treatment of neoplastic diseases.

Dr. J. F. Miguel, Uppsala, 15,000 for studies of the connection between molecular structure and estrogen with regard to antiestrogenic effect.

Professor O. Olsson, Docent M. Lindgren, Laboratory Researcher K. Liden, Lund, 14,900 for localization and type diagnosing heart tumors by isotope encephalographic methods.

Docent P. Perlmann, Stockholm, 23,000 for immuno-chemical studies of protein structure and metabolism under normal and pathological conditions (in the liver and other organs in rats).

Docent L. Revesz, Stockholm, 36,000 for continued experimental radiation biological work on mouse tumors.

Professor N. Ringertz, Stockholm, 40,000 for the purchase of a new electron microscope.

Docent B. Rosengren, Stockholm, 10,000 for determination of the total mass of single nerve cells after radiation treatment.

Professor J. Rundstrom, Stockholm, 33,000 for study of fertilization physiology, cell division mechanism, development and differentiation.

Professor H. Rydin and Amanuensis O. Magnusson, Stockholm, 11,400 for the study of radiomimetic effects in certain drugs and chemical-technical products by means of a botanical screening test.

Medical Licentiate B. Tjernberg, Uppsala, 9,000 for experimental lymphography with comparison of the x-ray picture of the lymph glands and vessels in metastasizing cancer and in inflammation, etc.

B. Tribukait, MD, and Laboratory Researcher A. Forsberg, Stockholm, 6,600 for study of early stages of leukocyte changes after radiation.

Medical Licentiate P. Westling, Umea, 7,000 to complete a prognostic study of the material on malignant lymphogranulomatosis at the Radium-House.

Travel Contribution

Docent H. Low, Stockholm, 9,000 for studies on the biochemical and structural organization of electron transport enzymes in mitochondria at the Institute for Enzyme Research, University of Wisconsin, Madison.

Medical Licentiate P. I. Nyman, Stockholm, 11,000 for the study of the pathology of thoracic diseases at the Laboratory of Pathology, Yale University School of Medicine.

Docent L. Rohl, Lund, 10,000 for studies of urological tumors and tissue culture technique.

J. Zajicek, MD, Stockholm, 10,000 kr for exfoliative cytology and puncture diagnosis.

CLUE TO VIRUS INCREASE FOUND BY SWEDISH RESEARCHERS?

Following is a translation of a newspaper article in Svenska Dagbladet, Stockholm, May 13, 1955

If one can find the solution to how a virus, polio virus for example, multiplies, then it is quite certain that also ideas will occur for the possibility of intervening at the right moment to prevent or retard its multiplication in the organism. It is, according to what Svenska Dagbladet has learned, not unlikely that a Swedish research group now has hit upon at least a clue to an explanation of the mechanics of virus increase.

Today, Friday, a report will be made for the first time before a Swedish audience on the research in this field which is carried out at the central bacteriological laboratory of the Hospital Directorate, in which, with the help of the electron microscope, interesting observations have been made on a previously unknown phenomenon within the nucleus of the cell.

The group project, the initiation of which was recently reported in Nature Magazine, has been carried out by Doctors A. Svedmyr, L. Kjellen and K. G. Thorsson, together with Civil Engineer G. Lagerman at the laboratory of the Hospital Directorate.

The results of the experiments will be presented before a Swedish professional audience in the form of a lecture on Friday, when the Scandinavian Society for Electron Microscopy gathers for its annual meeting at the Anatomical Institute of Karolinska Institutet, where Society President Professor N. Hast and Prosector Fr. Sj"strand will act as hosts.

Interesting Crystal Formation

What here is to be disclosed is, briefly, that the four-man group of scientists has been able, in the electron microscope, to observe very interesting and extremely regular crystal-like formations within the nucleus of tissue propagated cells, which were infected by an isolated virus. The possibility appears to exist that these mysterious formations have some significant connection with virus multiplication. In order to discover whether this is the case, intensive studies are now directed towards following the various stages of the virus growth and check in detail on what happens in the various phases of development.

In virus laboratories the world over, urgent work is in progress to throw light on the mechanism of virus multiplication. The final solution is expected to open the way to the desired knowledge on how one can most effectively and at the most suitable time affect a virus and thereby possibly win the decisive round in the fight against the virus diseases.

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